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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Application No.: 09/917,947 **Examiner:** Kang, Insun

Filing Date: July 31, 2001 **Art Unit:** 2193

First Inventor: Guido Kersten **Customer No.:** 23364

Attorney No.: KERS3001/JJC/LCD **Confirm. No.:** 1529

For: **BANK NOTE PROCESSING MACHINE AND METHOD
FOR OPERATING BANK NOTE PROCESSING
MACHINE**

APPEAL BRIEF

Mai Stop Appeal Brief - Patent
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INTRODUCTORY COMMENTS

This is an appeal brief filed pursuant to the Notice of Appeal filed August 17, 2007 and to the non-final Office Action dated June 5, 2007, in which claims 1, 2 and 4-7 are rejected in the above-identified application.

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I. REAL PARTY OF INTEREST

The real party of interest is the assignee of record: Giesecke & Devrient, GmbH (Munich, GERMANY).

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

A. Status of Claims in Proceeding

Claims 1, 2 and 4-7 are currently pending in the application. Claims 3 and 8-14 are canceled.

B. Identification of Appealed Claims

Claims 1-2 and 4-7 are being appealed. A copy of all of the pending claims as presented in the last entered amendment dated June 22, 2005 is included in the attached Appendix I.

IV. STATUS OF AMENDMENTS

There are no pending amendments of the claims. The last amendment was filed on June 22, 2005 of which entry was acknowledged in the Office action dated August 11, 2005.

Claims 1, 2 and 4-7 are pending.

Claims 3 and 8-14 are canceled.

V. SUMMARY OF CLAIMED SUBJECT MATTER

For the purposes of appeal, the rejection of independent claim 1 and its dependent claims 2 and 4-7 is appealed. Each of the claims is argued separately, and claims 1-2 and 4-7 do not stand or fall together.

Claim 1 recites a bank note processing machine. The bank note processing machine includes sensors (5), a transport system (6) and an input/output device (7) (Fig. 1; page 3, lines 12-17).

The bank note processing machine also includes a control device (3) that has an associated memory (4, 4a) (Fig. 1; page 3, lines 18-29). The control device (3) controls the elements of the bank note processing machine by means of software and/or data stored in the memory (4, 4a).

The bank note processing machine further has an interface (1) (Fig. 1; page 4, lines 5-14). The interface makes it possible to couple memory systems (2) of different types to the bank note processing machine in order to alter, supplement or replace the software and data in the memory (4a, 4). The memory system (2) has a drive (2b) and a storage medium (2a) which are suitable for optical and magnetic recording (Fig. 2; page 5, lines 1-12).

The transport system (6) of the bank note processing machine includes a singling unit and at least one stacking unit (only generic transport system is shown in drawings; page 3, line 30 through page 4, line 2). The transport system is arranged to transport single bank notes singled by the singling unit along the sensors (5) to the at least one stacking unit according to an evaluation of data obtained by the sensors (5) by the control device (3) (page 4, lines 1 and 2).

Claim 2 recites the bank note processing machine according to claim 1, wherein the interface (Fig. 1; page 4, lines 5-14) is a standardized interface, in particular according to PCMCIA (page 4, lines 11-14).

Claim 4 recites the bank note processing machine according to claim 1, wherein the memory (4, 4a) has a nonvolatile area (4), and, after coupling of the

memory system (2) to the interface, the software and/or data stored in the memory system (2) are stored in the nonvolatile area (page 4, lines 20-24).

Claim 5 recites the bank note processing machine according claim 1, wherein that the memory (4, 4a) has a volatile area (4a), and after coupling of the memory system to the interface the software and/or data stored in the memory system (2) are stored in the volatile area (page 4, lines 15-17).

Claim 6 recites the bank note processing machine according to claim 1, wherein data obtained in the bank note processing machine during operation are stored in the memory system (2) (page 6, lines 26-31).

Claim 7 recites the bank note processing machine according to claim 1, wherein the software and/or data stored in the memory system (4, 4a) are stored in encoded form, and the controller (3) is set up to decode the encoded software and/or data (page 7, lines 16-18).

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1, 2 and 4-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 5,909,502 (*Mazur*).

VII. ARGUMENT

As discussed in detail below, the basis for the rejection of claims 1, 2 and 4-7 does not amount to a case of obviousness for the combination of subject matter recited in the rejected claims. Therefore reversal of the rejection of claims 1, 2 and 4-7 is respectfully requested.

A. Claim Rejections

Claims 1, 2 and 4-7 in this application were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 5,909,502 (*Mazur*) in the Office action dated June 5, 2007.

B. Pertinent Law

The requirements for establishing a *prima facie* case of obviousness, as detailed in MPEP § 2143 - 2143.03 (pages 2100-122 - 2100-136), are: first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to combine the teachings; second, there must be a reasonable expectation of success; and, finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations.

Further, according to MPEP §2141(I), Patent examiners carry the responsibility of making sure that the standard of patentability enunciated by the Supreme Court and by the Congress is applied in each and every case. The Supreme Court in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), stated:

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.

C. The *Mazur* patent does not render claim 1 obvious

Reversal of the rejection of claim 1 is respectfully requested on the basis that the *Mazur* patent fails to teach, disclose, or suggest every limitation of the bank note processing machine according to claim 1. Accordingly, claim 1 is patentable in view of the teachings of the *Mazur* patent, since a *prima facie* case of obviousness has not been established.

A *prima facie* case of obviousness has not been established in the reliance of the *Mazur* patent because the standard of patentability to be applied in an obviousness rejection has not been met on the basis of the following observations.

(1) The *Mazur* patent does not teach, disclose, or suggest an interface which makes it possible to couple memory systems of different kinds to the bank note processing machine;

(2) the *Mazur* patent does not teach, disclose, or suggest a memory system having a drive and a storage medium which are suitable for optical and/or magnetic recording;

(3) although the *Mazur* patent describes a PCMCIA interface used for receiving a flash memory card, the *Mazur* patent does not describe either implicitly or explicitly that “the PCMCIA interface enables to couple to any memory system compatible according to PCMCIA” [emphasis added], as contended by the examiner. Hence, there is no premise for the examiner’s contention that it would be obvious for one skilled in the art at the time the invention was made to combine a memory system having a drive and a storage medium which are suitable for optical and/or magnetic recording with the bank note machine; and

(4) the examiner fails to consider the criticality and unexpected result of using a memory system having a drive and a storage medium which are suitable for optical and/or magnetic recording, as recited in claim 1 of the present invention.

First, the *Mazur* patent is directed to a currency discrimination machine that utilizes known parameters or patterns of banknotes in order to recognize and sort

different currencies or denominations of the same currency (col. 3, line 61 through col. 4, line 4). The resident memory of the currency discrimination machine may be upgraded when the parameters or patterns of the currencies change (col. 4, lines 4-12).

In order to accomplish this updating, a removable flash card 40 is provided having the updated parameter or pattern information, or other software upgrades and updates (col. 7, lines 55-62). While the *Mazur* patent recognizes that memories such as electrically erasable programmable read only memories (EEPROMs) or one-time programmable read-only memories may be used in place of the flash memory disclosed, there is no disclosure that the different memory types disclosed may be utilized with an interface which allows different memory systems to be coupled to the currency discrimination machine.

In fact, the only two embodiments disclosed that describe or illustrate the interface clearly show an interface that is configured to accept a particular size and type of memory, instead of an interface that allows different memory systems to be coupled to the currency discrimination machine, as required by pending claim 1.

Specifically, Figs. 4 and 5 each disclose a particularly defined slot 38 and socket 42 for receiving a single size and type of flash memory. Given the nature of the construction of the disclosed flash memory, a specifically defined socket that is specifically configured to physically receive the particular flash memory is required. If an improperly sized socket, or a mismatched socket and flash memory are utilized, the interface will simply not function.

Thus, the *Mazur* patent discloses uniquely sized and shaped sockets for receiving a correspondingly sized and shaped flash memory. There is no disclosure or suggestion in the *Mazur* patent to provide an alternate interface that would allow different types of memory systems to be coupled to the currency discrimination machine, as is required by pending claim 1.

Second, the *Mazur* patent does not disclose or suggest a bank note processing machine wherein the memory system has a drive and a storage medium which are suitable for optical and/or magnetic recording, as required by pending claim 1.

Instead, it is explained by the *Mazur* patent that it is highly preferred to employ a flash memory to update software employed by the system controller since the flash memory enables the memory to be erased and reprogrammed within fractions of a second, the flash memory is less expensive than EEPROMs, and that it offers a high degree of versatility for a relatively low cost memory structure (col. 6, lines 4-20; col. 8, lines 1-2). Appellant respectfully notes that the *Mazur* patent describes flash memory as being “a relatively low cost memory structure” to EEPROMs. However, there is no suggestion for comparison of flash memory with optical and/or magnetic medium.

The rejection appears to suggest that the flash card 40 is a drive and a storage medium which are suitable for optical and/or magnetic recording, since the flash card has information stored on it that relates to the magnetic or optical characteristics of the currency denominations to be evaluated (col. 7, lines 55-59). However, simply storing information related magnetic or optical characteristics of currency denominations is not the same as providing a drive and a storage medium which are suitable for optical and/or magnetic recording.

On the contrary, flash cards utilize a solid state configuration to store information as opposed to a drive and a storage medium which are suitable for optical and/or magnetic recording.

Third, there is no disclosure or suggestion in the *Mazur* patent that would tend to motivate a skilled artisan to provide a bank note processing machine with a drive and a storage medium which are suitable for optical and/or magnetic recording. On the contrary, the *Mazur* patent envisions a very limited memory system that provides inexpensive memory replacement within fractions of a second, and no input via keystrokes or other data entry by an operator (col. 6, lines 4-20; col. 8, lines 40-55).

In other words, the memory system of the *Mazur* patent is relatively inflexible with respect to the storage medium available for updating since it is very limited to the type of permissible storage medium. On the other hand, the memory system recited in pending claim 1 permits an operator to select from a plurality of memory

systems and may include criteria for selecting memory by memory volume, size, robustness and price (specification, page 2, lines 20-22). In particular, it is disclosed that a magnetic or optical recording medium having high writing density (specification, page 2, lines 29-30) is advantageous, and that the use of such a medium makes it possible to fall back on inexpensive recording media suitable for recording masses of data. Appellant respectfully submits that, among many differences between using a removable flash memory card, such as described in the *Mazur* patent, and using an optical and/or magnetic medium, flash memories are historically much costlier and have less capacity than an optical and/or magnetic medium.

In the rejection, the examiner contends that the *Mazur* patent describes a PCMCIA interface used to receive a flash memory card. The examiner then improperly and erroneously interprets the *Mazur* patent as describing or suggesting that the PCMCIA interface enables the currency scanner of the *Mazur* patent to be couple to any memory system. The examiner cited col. 8, lines 25-40 of the *Mazur* patent as support for this interpretation. Based on this improper and erroneous interpretation of the *Mazur* patent as a premise, the examiner then concludes that it would have been obvious to modify the currency scanner of the *Mazur* patent with a PCMCIA interface to use an alternative memory system having a hard drive and a storage medium with a disc drive, Click Drive, etc. for lower cost or simply for user preference.

In response, Appellant respectfully asserts that not only does the *Mazur* patent fail to teach, disclose, or suggest the use of a storage medium which are suitable for optical and/or magnetic recording, the *Mazur* patent also fails to teach, disclose, or suggest the use of PCMCIA coupled to any memory system. Further, the examiner-cited col. 8, lines 25-40, or any other portions of the *Mazur* patent for that matter, completely fails to support the examiner's improper and erroneous interpretation. Hence, there is no premise for the examiner's conclusion that, since the *Mazur* patent describes any memory system may be connected to a PCMCIA, the use of a memory

system having a drive and a storage medium which are suitable for optical and/or magnetic recording would be obvious.

Fourth, the use of a memory system having a drive and a storage medium which are suitable for optical and/or magnetic recording as a memory system of different kinds, as recited in claim 1, is a careful and engineered feature with many advantages over other storage media. This critical use of a memory system having a drive and optical and/or magnetic recording medium is evident in that Appellant recognizes the known use of flash memory card, such as shown in page 1, lines 21-26 of the specification, and describes its limitations. In fact, the *Mazur* patent is discussed in the present application as an example of the use flash memory card in a software loading system for a currency scanner.

Particularly, on page 2, line 27 through page 3, lines 16 of the specification specifically describes the use of a flash memory card in the *Mazur* patent with prior art processing machines and the disadvantages of its inflexibility. Hence, to solve the problem of inflexibility of using a flash memory card, the presently claimed invention, including a memory system having a drive and a storage medium which are suitable for optical and/or magnetic recording, is described.

Further, throughout the present specification, numerous advantages of using a memory system having a drive and a storage medium suitable for optical and/or magnetic recording are disclosed. For example, as previously mentioned, the memory system recited in pending claim 1 permits an operator to select from a plurality of memory systems and may include criteria for selecting memory by memory volume, size, robustness and price (specification, page 2, lines 20-22). In particular, it is disclosed that a magnetic or optical recording medium having high writing density (specification, page 2, lines 29-30) is advantageous, and that the use of such a medium makes it possible to fall back on inexpensive recording media suitable for recording masses of data. Therefore, Appellant has demonstrated the criticality and unexpected result of the claimed feature of a storage medium which is suitable for optical and/or magnetic recording over known prior art such as the *Mazur* patent.

The examiner, on the other hand, fails to recognize the criticality and unexpected result of using a memory system having a drive and a storage medium which are suitable for optical and/or magnetic recording of claim 1 of the present invention. In this regard, Appellant respectfully submits that the standard of patentability to be applied in obviousness rejections in accordance with MPEP §2141 has not been met. Particularly, the examiner has failed to evaluate evidence of secondary consideration in ignoring Appellant's showing of the criticality and unexpected result of the claimed feature of a memory system having a drive and a storage medium which are suitable for optical and/or magnetic recording.

Moreover, according to MPEP §2141(II), when applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:

- (A) The claimed invention must be considered as a whole;
- (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and
- (D) Reasonable expectation of success is the standard with which obviousness is determined.

Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

Hence, Appellant respectfully submits that the examiner's reliance on the *Mazur* patent, which is already discussed in details in the present application as known prior art, appears to be nothing more than improper hind sight in view of the arguments set forth above, and that tenet C shown above has not been followed.

In view of the above, the *Mazur* patent fails to teach, disclose, or suggest all of the features recited in claim 1. Since a *prima facie* case of obviousness has not been established in the obviousness rejection over the *Mazur* patent, and standard of patentability to be applied in obviousness rejections has not been met, Appellant respectfully requests reconsideration and withdrawal of this rejection.

D. The *Mazur* patent does not render claim 2 obvious

For the same arguments set forth in the traverse of the rejection of claim 1, claim 2, which depends from claim 1, is also non-obvious. Further, although the *Mazur* patent describes the coupling of a flash memory card to a currency scanner via a PCMCIA interface, the *Mazur* patent fails to teach, disclose, or suggest a memory system having a drive and a storage medium which are suitable for optical and/or magnetic recording interfaced with a bank note processing machine via a PCMCIA interface.

It is submitted that one skilled in the art would not understand to a memory system having a drive and a storage medium which are suitable for optical and/or magnetic recording interfaced with a bank note processing machine via a PCMCIA interface in view of the clear teachings of the *Mazur* patent to use a flash card for its particular desirable characteristics. Hence, reversal of the rejection of claim 2 is respectfully requested.

E. The *Mazur* patent does not render claim 4 obvious

For the same arguments set forth in the traverse of the rejection of claim 1, claim 4, which depends from claim 1, is also non-obvious. Further, Appellant respectfully submits that the examiner-cited col. 7, lines 53-67 in the rejection of claim 4 merely describe flash card 40 with its own memory adapted to be pre-programmed with updated software that may be other types of memory, such as EEPROMs or one-time programmable read-only memory. That is, the cited text of the *Mazur* patent does not support the allegation of the *Mazur* patent as describing the features recited in claim 4 of the present invention.

It is respectfully submits that one skilled in the art would not have been motivated by the above-mentioned portion of the *Mazur* patent to provide a feature wherein the memory has a nonvolatile area, and after coupling of the memory system

to the interface the software and/or data stored in the memory system are stored in the nonvolatile area, as recited in claim 4. Hence, reversal of the rejection of claim 4 is respectfully requested.

F. The *Mazur* patent does not render claim 5 obvious

For the same arguments set forth in the traverse of the rejection of claim 1, claim 5, which depends from claim 1, is also non-obvious.

It is respectfully submits that one skilled in the art would not have been motivated by the above-mentioned portion of the *Mazur* patent to provide a feature wherein the memory has a volatile area, and after coupling of the memory system to the interface the software and/or data stored in the memory system are stored in the volatile area, as recited in claim 5. Hence, reversal of the rejection of claim 5 is respectfully requested.

G. The *Mazur* patent does not render claim 6 obvious

For the same arguments set forth in the traverse of the rejection of claim 1, claim 6, which depends from claim 1, is also non-obvious. Further, Appellant respectfully asserts that the examiner-cited text in col. 7, lines 53-67 and col. 8, line 13-40 of the *Mazur* patent has no relation to Appellant's feature wherein data obtained in the bank note processing machine during the operation are stored in the memory system (i.e., a memory system having a drive and a storage medium which are suitable for optical and/or magnetic recording), as recited in claim 6. In fact, the cited text of the *Mazur* patent merely describes flash card 40, as discussed above.

It is respectfully submits that one skilled in the art would not have been motivated by the above-mentioned portion of the *Mazur* patent to provide a feature wherein data obtained in the bank note processing machine during operation are stored in the memory system, as recited in claim 6. Hence, reversal of the rejection of claim 6 is respectfully requested.

H. The *Mazur* patent does not render claim 7 obvious

For the same arguments set forth in the traverse of the rejection of claim 1, claim 7, which depends from claim 1, is also non-obvious. Further, the examiner-cited text in col. 8, lines 40-58 of the *Mazur* patent is completely silent on any encoded software and/or data or decoding of the encoded software and/or data by a controller. That is, the *Mazur* patent is completely silent regarding the feature wherein the software and/or data stored in the memory system are stored in encoded form, and the controller is set up to decode the encoded software and/or data, as recited in claim 7.

It is respectfully submits that one skilled in the art would not have been motivated by the above-mentioned portion of the *Mazur* patent to provide a feature wherein the software and/or data stored in the memory system are stored in encoded form, and the controller is set up to decode the encoded software and/or data, as recited in claim 7. Hence, reversal of the rejection of claim 7 is respectfully requested.

Therefore, as set forth above, the *Mazur* patent fails to teach, disclose, or suggest all of the features recited in dependent claims 2, and 4-7. Accordingly, a *prima facie* case of obviousness has not been established in the obviousness rejection of dependent claims 2 and 4-7 over the *Mazur* patent, and withdrawal of these rejections is respectfully requested.

VIII. Conclusion

For the reasons set forth above, independent claim 1 and its dependent claims 2 and 4-7 of the pending application define subject matter that is not obvious under 35 U.S.C. § 103(a) in view of the *Mazur* patent. Accordingly, reversal of the rejection of claims 1- 2 and 4-7 is respectfully requested.

The Office is authorized to charge any additional fees associated with this communication Deposit Account No. 02-0200.

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Respectfully submitted,

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Date: October 16, 2007

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IX. CLAIMS APPENDIX

1. A bank note processing machine comprising:

sensors, a transport system including a singling unit and at least one stacking unit, an input/output device, and

a control device with an associated memory which controls the elements of the bank note processing machine by means of software and/or data stored in the memory and

an interface which makes it possible to couple memory systems of different kinds to the bank note processing machine in order to alter, supplement or replace the software and/or data stored in the memory;

wherein the memory system has a drive and a storage medium which are suitable for optical and/or magnetic recording

wherein the transport system transports single bank notes singled by the singling unit along the sensors to the at least one stacking unit according to an evaluation of data obtained by the sensors by the control device.

2. The bank note processing machine according to claim 1, wherein that the interface is a standardized interface, in particular according to PCMCIA.

Claim 3 (Cancelled)

4. The bank note processing machine according to claim 1, wherein the memory has a nonvolatile area, and after coupling of the memory system to the

interface the software and/or data stored in the memory system are stored in the nonvolatile area.

5. The bank note processing machine according claim 1, wherein that the memory has a volatile area, and after coupling of the memory system to the interface the software and/or data stored in the memory system are stored in the volatile area.

6. The bank note processing machine according to claim 1, wherein data obtained in the bank note processing machine during operation are stored in the memory system.

7. The bank note processing machine according to claim 1, wherein the software and/or data stored in the memory system are stored in encoded form, and the controller is set up to decode the encoded software and/or data.

Claims 8 - 14 (Cancelled)

X. EVIDENCE APPENDIX

There are no copies of evidence entered and relied upon in this appeal
of the pending application.

XI. RELATED PROCEEDINGS APPENDIX

There are no related proceedings or decisions rendered by a court or the Board of Appeals in any proceeding identified in the related appeals and interferences section in the pending application.